

## CLIMATOLOGICAL DATA FOR DECEMBER, 1911.

## DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

## GENERAL SUMMARY.

Although the mean temperature averaged slightly more than a degree below normal, the month was generally recognized as being unusually pleasant. The weather up to the 26th was controlled by anticyclones that moved slowly from the ocean and persisted in remaining over the Central Plateau States. Under these conditions the temperature continued remarkably uniform and there were no very warm or very cold spells. On the 26th a cyclone of the regular winter type made its appearance over western Washington, and as this depression was quickly followed by another the weather became more changeable and stormy during the remainder of the month. During this period large anticyclonic areas were central over the Canadian Northwest that were attended by very low temperatures. The cyclones took the southeastward track which caused the prevailing winds to be easterly and considerable cold air drained into this district, especially in its eastern portion. Low temperatures were first felt in Montana on the 24th, and the weather was so severe in that section during the last week that the slight excess in temperature that occurred during the first 20 days was overcome and there was a deficiency in the monthly average of nearly  $3^{\circ}$ . Precipitation while less than usual was well distributed. More than the normal amount of snow fell at low elevations, while in the mountains the amount was normal. That which fell early became well packed in the higher ranges, but that at intermediate altitudes was loose and in condition to melt rapidly. The snow in the Oregon valleys was subjected to considerable thawing and a large amount of moisture was absorbed by the soil. In Idaho the ground remained frozen, which prevented the soil from absorbing any great amount of moisture; but on the other hand the frozen ground made the roads good and facilitated the hauling of produce to the railways. Railway traffic suffered few interruptions, but the stage of the water in the navigable rivers was so low that small steamers were greatly hampered in their operations. No casualties occurred at sea (in the vicinity of this district) due to stress of weather and the agricultural outlook at the end of the month was very encouraging.

## TEMPERATURE.

The mean temperature for the month was below normal over the greater part of the district. A moderate excess was reported in that portion of the Columbia River Valley lying between the Willamette and the Snake Rivers and over a small area in central and extreme northwestern Washington. While the greatest deficiency occurred in the eastern part of the district along the Rocky Mountains, some marked negative departures were noted in

central and southwestern Oregon and in northeastern Washington. The monthly means, as is usual, were highest along the coast, and lowest in the mountains of southeastern Idaho and western Wyoming, ranging from  $45^{\circ}$  at Newport, Oreg., to  $6.8^{\circ}$  at Moran, Wyo. Uniform temperatures, within a few degrees of the normal, prevailed during the first half of the month; during the latter half, moderately low temperatures occurred over the entire district, except that portion along and near the Rocky Mountains, where abnormally low temperatures were recorded during the last week.

The mean temperature, as determined from the records of 258 stations, was  $30.8^{\circ}$ , which is  $1.2^{\circ}$  below the district average for December. The highest temperature recorded,  $65^{\circ}$ , occurred at Bay City, Oreg., on the 2d; Ashland, Oreg., on the 3d; and at Newport, Oreg., on the 7th. The lowest,  $27^{\circ}$  below zero, occurred at Moran, Wyo., on the 19th.

## PRECIPITATION.

There was less than the usual amount of precipitation over the district in general. Although a few scattering stations report an excess, there was no well-defined area over which the average was not below normal. The heaviest precipitation was along the coast and on the western slopes of the Coast and Cascade Ranges in Oregon, and the Olympic Mountains in Washington, and the least occurred in south-central Oregon and southern Idaho. The precipitation was well distributed throughout the month, the heaviest occurring as a rule about the 23d.

As determined from the records of 347 stations, the average for the district was 3.11 inches, which is 1.23 inches below the normal amount. The greatest precipitation for the month was 17.46 inches at Quiniault, Wash., and the least was a trace at Paisley, Oreg. The greatest amount recorded in 24 hours was 2.88 inches, on the 23d, at Happy Home, Coos County, Oreg.

## THE RIVERS.

Mean stages on all streams were much below normal, and in nearly every case they averaged lower than in the preceding month.

The Willamette River at Portland has not averaged so low since December, 1890, December averages alone being considered. On most parts of the river the averages for the month were 3 to 4 feet lower than the normal December stages. The highest water occurred on the last few days of the month, and the lowest during the first week, the mean stage being about 1 foot lower than in November. The highest stage of the month at the

lower locks, Oregon City, was 11.9 feet, and the lowest 7 feet.

The Columbia River continued to fall throughout the month. The mean stage was about 1 foot lower than in November, and at all points the stages were much below the December normal. At The Dalles the highest water was 1.9 feet, and the lowest 0.0 foot. At Cascade Locks the highest stage was 1.5 feet, and the lowest—0.3 foot. Maximum stages occurred on the 1st, and minimum on the 31st.

Water was somewhat lower than usual in the Snake River, but not so much so as in the Columbia. The water was highest on the 18th and 19th, and lowest on the closing days of the month, the average stages being lower than in November.

#### MISCELLANEOUS PHENOMENA.

High winds were reported during the holiday season throughout the section. Stations equipped with recording instruments experienced maximum velocities ranging from 24 miles to 66 miles per hour. Dense fogs were quite frequent at Roseburg, Spokane, North Head, Seattle, Tacoma, and Portland. Lunar and solar halos were observed quite generally, especially so during the first week of the month. Thunderstorms occurred at the mouth of the Columbia River and along the Oregon coast near the close of the month. Sleet fell at Walla Walla and Tatoosh, Wash., and also in a few localities south of the Columbia River, while hailstorms were confined to the southwestern part of the section.

TABLE 1.—Climatological data for December, 1911. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeted.	Number of rainy days 0.01 inch or more.	Number of partly cloudy days.	Number of clear days.		
<b>Montana.</b>																			
Anaconda.....	Deer Lodge.....	5,300	10	24.0	- 2.0	52	4	- 19	29	38	0.25	- 0.45	0.10	3.4	4	8	7	16	C. D. Demond.
Butte.....	Silver Bow.....	5,716	17	22.8	- 3.1	50	4	- 14	29	29	1.12	+ 0.38	0.30	11.2	7	11	9	11	J. R. Wharton.
Columbia Falls.....	Flathead.....	3,100	16	19.2	- 6.0	42	9	- 13	29	24	2.85	+ 0.93	0.25	33.3	17	24	0	6	J. M. Grist.
Como **.....	Ravalli.....	3,700	3	27.4	- 45	17	5	- 22	37	22	0.39	-	0.22	11.0	6	9	9	13	Hiram Platt.
East Anaconda.....	Deer Lodge.....	5,500	6	24.4	- 48	4	- 13	30	33	0.38	-	0.19	3.9	8	8	7	16	C. D. Demond.	
Fortine.....	Lincoln.....	3,975	6	20.9	- 45	1	- 15	29†	37	1.87	-	0.35	14.5	12	3	4	24	Mike Petery.	
Hamilton.....	Ravalli.....	3,575	9	26.7	-	54	1	- 15	29	33	0.53	- 0.15	0.27	9.0	4	9	13	9	Bitter Root Valley Irrig. Co.
Hat Creek.....	Powell.....	6,000	2	-	-	-	-	-	-	-	1.09	-	0.28	18.5	10	3	9	19	M. K. Landreth.
Kalispell.....	Flathead.....	2,965	13	22.2	- 1.7	42	9	- 7	29	21	0.95	- 0.90	0.26	9.5	13	1	5	25	U. S. Weather Bureau.
Libby.....	Lincoln.....	2,055	2	22.4	-	43	10	- 9	25	25	0.90	-	0.55	4.9	6	2	17	12	U. S. Forest Service.
Lost Creek.....	Deer Lodge.....	5,200	2	-	-	-	-	-	-	-	0.24	-	0.12	5.4	3	15	4	12	Frank Henault.
McGinnis Meadows.....	Lincoln.....	1	22.2	-	-	41	1	- 9	29	29	0.58	-	0.20	5.8	4	5	7	19	H. L. Beebe.
Missoula.....	Missoula.....	3,225	32	25.2	+ 0.7	46	1	- 6	29	23	0.84	- 0.53	0.30	8.4	6	-	-	-	U. S. Weather Bureau.
Ophir.....	Powell.....	6,800	3	-	-	-	-	-	-	-	0.64	-	0.23	7.4	5	6	16	9	E. S. Wilton.
Ovando.....	do.....	4,207	12	16.0	- 4.3	38 <sup>b</sup>	8†	- 19 <sup>b</sup>	29	24 <sup>b</sup>	2.15	+ 0.27	0.27	32.5	18	10 <sup>b</sup>	10 <sup>b</sup>	sw.	S. B. Muchmore.
Philipsburg.....	Granite.....	5,275	8	23.1 <sup>b</sup>	-	34 <sup>b</sup>	1	- 16	29	38 <sup>b</sup>	0.53	-	0.33	5.5	3	13 <sup>b</sup>	0 <sup>b</sup>	sw.	G. T. Bramble.
Plains.....	Sanders.....	2,475	13	25.6	- 2.5	49	1	- 3	29	23	0.20	- 0.40	0.20	2.0	1	11	2	18	M. H. Pierce.
Pleasant Valley.....	Flathead.....	3,500	4	20.7	-	47	1	- 23	29	35	1.26	-	0.30	10.6	14	6	2	23	A. D. Stillman.
Polson.....	do.....	2,920	4	27.7	-	47	1	1	29	18	0.59	-	0.14	10.0	6	-	-	-	F. P. Brown.
Proctor.....	do.....	2,800	7	24.0	-	50	1	2	26	36	0.80	-	0.20	8.0	8	-	-	-	C. E. Proctor.
Saint Ignatius.....	Missoula.....	2,700	6	27.4	-	48	8	- 7 <sup>a</sup>	29	23 <sup>a</sup>	0.50	-	0.24	7.5	7	1	6	24	U. S. Reclamation Service.
Saltse.....	do.....	3,000	7	-	-	-	-	-	-	-	0.23	-	0.70	29.0	7	6	0	25	E. K. Tarbox.
Stevensville.....	Ravalli.....	-	24.7	-	-	51 <sup>a</sup>	1	- 14	29	33 <sup>a</sup>	0.28	-	0.20	3.8	3	4	8	19	J. S. Birge.
Thompson Falls.....	Sanders.....	2,462	1	28.1	-	42	8†	5	29	21	0.45	-	0.16	3.3	8	0	5	26	R. H. Bushnell.
Willow Glen Stock Farm.....	Deer Lodge.....	5,064	1	-	-	-	-	-	-	-	-	-	-	13	6	12	sw.	G. F. Luce.	
<i>Wyoming.</i>																			
Afton.....	Uinta.....	6,200	7	14.2	- 4.9	36	16	- 22	19	39	0.65	- 0.57	0.34	9.5	9	12	4	15	A. V. Call.
Alta.....	do.....	7,000	1	13.8	-	58	3	- 20	19	58	1.66	-	0.32	23.8	8	10	3	18	Mrs. Lucy Brown.
Bechler.....	Yellowstone Park.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U. S. Army.	
Bedford.....	Uinta.....	5,900	11	10.4	- 7.7	32	16	- 20	19	38	1.23	- 0.20	0.32	12.4	6	12	4	15	C. G. Heiner.
Moran.....	do.....	6,8	25	11.7	-	40	1	- 17	19	40	0.70	-	0.24	9.5	7	5	5	21	U. S. Reclamation Service.
Snake River.....	Yellowstone Park.....	7,000	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U. S. Army.	
<i>Nevada.</i>																			
San Jacinto.....	Elko.....	-	6	22.4	-	54	4	- 14	19	46	0.70	-	0.30	7.0	3	15	0	16	M. Browning.
<i>Utah.</i>																			
Standrod.....	Boxelder.....	-	7	24.2	-	53	4	- 2	19	32	0.37	-	0.17	5.3	6	14	6	11	nw.
<i>Idaho.</i>																			
Albion.....	Cassia.....	4,650	12	-	-	-	-	-	-	-	0.25	-	0.08	0.7	4	13	9	9	w.
Almo.....	do.....	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Wm. D. Cahoon.	
Alpha.....	Boise.....	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	J. W. King.	
American Falls.....	Oneida.....	4,341	20	21.5	- 3.8	50	5	- 4	26	45	2.09	-	0.36	30.7	11	13	2	16	Geo. Stoll.
Arrow Rock.....	Boise.....	28.9	-	45	12	9	21	26	21	26	0.39	-	0.20	10.6	8	3	22	6	U. S. Reclamation Service.
Blackfoot.....	Bingham.....	4,503	16	21.8 <sup>a</sup>	- 1.8	48 <sup>b</sup>	6	- 9 <sup>b</sup>	26	51 <sup>b</sup>	0.63	- 0.26	0.20	14.5	11	10	2	19	E. A. Dowd.
Blackfoot Dam.....	Bannock.....	6,200	2	11.7	-	40	1	- 17	19	40	1.20	-	0.25	14.7	11	10	2	19	N. W. Irisfield.
Bock's Ranch.....	Elmore.....	3,500	2	-	-	-	-	-	-	-	1.03	-	0.24	14.7	11	10	2	19	Wm. Bock.
Bogus Creek.....	Boise.....	4,200	3	-	-	-	-	-	-	-	1.72	-	0.40	22.5	9	4	20	7	F. P. Ingraham.
Boise.....	Ada.....	2,739	26	31.2	- 1.0	50	5	11	21	23	0.73	- 0.94	0.23	8.4	11	5	9	17	U. S. Weather Bureau.
Bonner's Ferry.....	Bonner.....	1,550	5	25.9	-	44	10	- 5	31	32	2.21	-	0.57	46.3	12	12	11	8	W. H. Heideman.
Boulder Mine.....	Boise.....	4,800	2	-	-	-	-	-	-	-	2.21	-	0.57	2.5	4	17	14	0	Patrick Moriarty.
Bufl.....	Twin Falls.....	3,800	5	30.0	-	52	3†	10	28†	29	0.60	-	0.30	10.7	8	8	14	9	Hugh Taylor.
Caldwell.....	Canyon.....	2,372	7	30.0	-	50	4†	9	30	31	0.82	-	0.27	10.7	8	8	14	9	Wm. J. Boone.
Camas.....	Fremont.....	4,815	3	14.5	-	48	2	- 26	31	51	1.00	-	0.40	14.0	7	0	19	12	Mrs. Edna Faulkner.
Cambridge.....	Washington.....	2,651	16	25.6	- 0.7	48	1	- 5	21	33	2.03	- 1.21	0.46	24.5	7	12	8	11	C. H. Shepherd.
Cedar Creek Dam.....	Twin Falls.....	1	-	-	-	-	-	-	-	-	0.76	-	0.19	8.8	8	9	11	11	Robert Hoffman.
Chesterfield.....	Bannock.....	5,424	15	15.6 <sup>b</sup>	- 4.2	40 <sup>b</sup>	4†	- 10 <sup>b</sup>	1†	48 <sup>b</sup>	2.07	+ 0.82	0.32	20.0	11	-	-	-	Chas. S. West.
Clyde.....	Custer.....	1	-	-	-	-	-	-	-	-	2.21	-	0.57	46.3	12	12	11	8	R. L. Sutcliffe.
Council.....	Adams.....	1	27.0	-	49	4	- 1	26	32	-	-	-	0.20	6.0	11	6	14	F. L. Featherston.	
Culdesac.....	Nez Perce.....	1,520	3	33.5	-	47	10	9	26	20	0.85	-	0.51	8.0	3	3	6	22	R. R. Richmond.
Deary.....	Latah.....	-	-	-	-	-	-	-	-	-	-	-	-	26.0	11	11	6	14	H. P. Henry.
Dent.....	Clearwater.....	1,350	5	30.4 <sup>b</sup>	-	46	4	- 2 <sup>b</sup>	26	23 <sup>b</sup>	-	-	26.7	2	11	18	18	Emil Schuessler.	
Driggs.....	Fremont.....	6,097	5	12.0	-	38	4	- 15	18†	36	0.98	-	0.32	11.2	8	6	7	18	W. H. Durrant.
Emmett.....	Canyon.....	2,350	5	29.4 <sup>b</sup>	-	47 <sup>b</sup>	9	- 3 <sup>b</sup>	21	32 <sup>b</sup>	0.64	-	0.18	5.6	7	2	13	16	C. P. Kar.
Forney.....	Lemhi.....	12	20.6	- 0.7	44	1	- 8	27	35	1.03	- 0.64	0.31	10.3	4	5	7	19	M. B. Merritt.	
Garden Valley.....	Boise.....	3,600	5	-	-	-	-	-	-	-	37.5	-	0.55	8	3	20	-	Mrs. Gertrude M. Ross.	
Garnet.....	Elmore.....	2,575	12	33.0	- 1.6	53	4†	10	25	34	0.43	- 0.24	0.30	2	15	10	6	e.	A. A. Kenison.
Glenns Ferry.....	do.....	2,569	3	30.4	-	58	3	1	30	47	0.60	-	0.21	7.5	7	15	5	11	I. E. Perkins.
Gooding.....	Lincoln.....	3,572	2	27.1	-	55	4	- 5	30	35	0.09	-	0.04	2.2	3	6	14	11	John Krall, jr.
Grand Forks.....	Shoshone.....	3,000	2	24.8	-	39	16	- 8	26	36	2								

TABLE 1.—*Climatological data for December, 1911. District No. 12—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Idaho—Continued.</i>																				
Mesa.	Adams.	3,275	2	28.6°	51°	4	3°	26°	20°	3.10	0.50	6	1	24	n.	I. S. Carter.				
Middle Fork.	Idaho.	1,250	2	32.7°	45°	17°	11°	29°	47°	0.82	0.40	8.7	5	6	8	17	w.	Jos. McGhee.		
Milner.	Twin Falls.	4,110	8	27.1	50	4	1	29	47	0.82	1.36	16.5	11	11	1	19	e.	James K. Young.		
Moscow.	Latah.	2,748	19	29.8	-1.9	50	12	3	26	22	1.16	0.28	7.0	5	11	13	7	...	University of Idaho.	
Mountainhome.	Elmore.	3,150	6	26.0	54	3	-7	30	42	0.65	0.33	7.8	6	6	1	13	...	Mrs. Ellen Manton.		
Murtaugh.	Twin Falls.	5	24.0	54°	4	10°	29	37	67	0.67	0.26	12.0	4	9	3	19	w.	J. E. Steinour.		
Nez Perce.	Lewis.	3,082	2	27.4	47	1	8	25	28	0.65	0.26	12.0	4	9	3	19	...	P. Mitchell.		
Oakley.	Cassia.	4,700	18	26.5	-3.1	57	4	3	19°	40	0.20	-0.32	20.0	1	3	18	10	...	John Adams.	
O'Hara Bar.	Idaho.	1,400	1	32.5°	40°	15	15°	29	17°	...	27.1	...	...	...	...	...	...	...	J. D. Agnew.	
Orofino.	Clearwater.	1,027	7	30.7	45	18	5	20	20	2.76	0.35	23.5	18	0	18	13	...	Geo. Alteneder.		
Payette.	Canyon.	2,159	19	28.6	-2.4	50	10	-3	21	33	1.97	+0.53	0.60	11.4	5	8	5	18	n.	E. F. Allen.
Peaceful Valley.	do.	2,325	1	27.4	47	1	8	25	28	0.65	0.26	12.0	4	9	3	19	...	J. W. Newton.		
Pebble.	Bannock.	5,277	3	17.6	46	8	-6	26	39	1.50	0.32	18.0	13	14	5	12	sw.	Mrs. Fannie Say.		
Pierson.	Custer.	7,000	3	12.0	38	9	-21	24	41	0.71	0.51	9.0	2	20	0	11	s.	David P. Clarke.		
Pine.	Elmore.	4,100	2	27.8	52	5	1	21	32	0.51	1.03	31.8	5	0	22	9	...	Mrs. Jennie Potter.		
Pleasant Valley.	Ada.	3,000	4	27.8	-3.4	51	4	5	26	29	0.41	0.17	8.9	9	10	9	12	se.	C. E. Freidrich.	
Pocatello.	Bannock.	4,483	12	25.0	-3.4	51	4	5	26	29	0.41	-0.45	10.0	4	8	7	15	9	...	U. S. Weather Bureau.
Pocatello Nursery.	do.	5,396	5	19.2	45	4	-10	25	35	...	17.0	...	8	16	7	...	...	P. T. Wrensted.		
Poplar.	Bonneville.	1	19.2	45	4	-10	25	35	...	...	...	...	...	...	...	...	...	C. M. Lawrence.		
Porthill.	Bonner.	1,665	22	...	...	...	...	...	...	2.24	0.40	30.4	8	15	0	16	...	H. A. French.		
Powers Ranch.	Boise.	4,300	2	...	...	...	...	...	...	...	39.5	10	9	10	12	...	...	Mrs. Mary French.		
Pyle Creek.	Elmore.	3,100	2	...	...	...	...	...	...	1.48	0.23	18.2	11	7	9	15	...	P. V. Smith.		
Rattlesnake Creek.	Richfield.	4,000	2	29.2	50	3	-12	30	37	0.35	0.18	5.0	6	9	10	12	...	R. M. Green.		
Roseberry.	Boise.	1	14.2	35	5	-21	21	42	...	...	21.8	...	8	13	10	...	...	Idaho Irrigation Co.		
Roseworth.	Twin Falls.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Dr. Wallace Johnson.		
Ruby Creek.	Boise.	4,400	2	...	...	...	...	...	...	2.19	0.42	31.2	12	8	6	17	...	D. B. Hartwell.		
Rupert.	Lincoln.	4,204	5	24.5	51	4	-12	29	37	0.37	0.19	4.1	4	11	7	13	...	O. A. Hatter.		
St. Maries.	Kootenai.	2,263	15	31.3°	-1.2	43°	9	-30	20°	35°	2.03	-1.40	0.55	19.9	...	...	...	Will Parry.		
Salmon.	...	4,040	6	18.2	40	7	-8	30	25	1.56	0.28	13.5	10	4	26	1	...	J. S. Turnbull.		
Salmon River Dam.	Twin Falls.	4	33.4°	40	8	-28	11	34°	1.00	...	0.41	4.2	7	...	...	...	B. C. d'Easum.			
Sandpoint.	Bonner.	2,086	1	26.1	41	8	-26	27	29	...	0.88	...	7	...	...	...	...	Mrs. Paul Schnell.		
Sheep Hill.	Boise.	5,000	2	...	...	...	...	...	...	2.08	0.45	40.2	13	...	...	...	...	J. H. Edgerton.		
Shoshone.	Lincoln.	3,908	4	24.6°	51°	4	-8	30	30	0.35	0.14	7.5	6	...	...	...	...	C. M. Gardner.		
Silver City.	Owyhee.	6,280	4	...	...	...	...	...	...	1.88	0.35	24.9	15	11	7	13	...	Zell Truman.		
Smith Prairie.	Elmore.	5,200	2	...	...	...	...	...	...	1.56	0.29	19.3	12	...	...	...	...	A. D. Bradfield.		
Soldier Creek.	Blaine.	1	20.8°	51	3	-5	25	27	25	...	0.70	...	...	...	...	...	...	W. W. Newell.		
Spirit Lake.	Kootenai.	2	25.0	49	10	-9	26	35	5.78	...	0.80	31.4	12	10	1	26	...	J. E. Minear.		
Springfield.	Bingham.	4,420	3	27.0	47	5	0	18	32	0.67	0.30	7.9	4	2	17	12	...	M. C. Krause.		
Sugar.	Fremont.	4	16.4	44	2	-12	20	36	0.73	...	0.34	13.0	8	4	10	17	...	Mrs. W. A. Edwards.		
Sunyside.	Elmore.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Utah-Idaho Sugar Co.		
Tripod Mountain.	Boise.	4,300	2	...	...	...	...	...	...	2.46	0.46	33.2	12	10	10	11	...	Col. M. W. Wood.		
Twin Falls.	Twin Falls.	3,825	6	27.6	59	3	-3	29	46	0.78	0.40	7	5	18	8	w.	...	Mrs. Verna Paddock.		
Vernon.	Fremont.	14	16.8	-3.9	42	4	-11	21	31	1.38	-0.33	0.55	15.0	8	6	7	18	...	J. A. Waters.	
Wallace.	Shoshone.	2,728	4	28.6	46	10	4	26	20	2.15	0.58	...	20	...	...	...	...	...	A. M. Slater.	
Weiser.	Washington.	2,114	1	...	...	...	...	...	...	...	0.20	5.8	4	8	20	3	w.	U. S. Weather Bureau.		
Wendell.	Lincoln.	3,400	3	26.4	55	5	0	29	40	0.52	...	...	...	...	...	...	...	C. O. Sappington.		
<i>Washington.</i>																			C. L. Dingler.	
Aberdeen.	Chehalis.	162	20	30.8	-1.2	53	1	26	31	17	9.76	-4.17	1.97	2.0	22	0	24	7	w.	C. S. Weatherwax.
Anacortes.	Skagit.	60	17	41.2	54	1	28	31	18	4.41	+ 0.63	0.94	0.8	15	2	18	11	...	Douglas Allmond.	
Baker.	do.	200	5	39.1	50	27	22	31	17	9.23	...	1.15	26.1	20	3	23	5	...	R. M. White.	
Bellingham.	Whatcom.	60	16	41.8	-0.1	55	57	21	30	16	-0.31	0.50	10.0	16	8	11	12	...	Sanford B. Mayhew.	
Bellingham (near).	do.	107	...	39.4	51	17	19	30	21	4.46	0.70	10.0	22	8	14	9	...	U. S. Bur. of Plant Industry.		
Beverly.	Grant.	545	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Blaine.	Whatcom.	57	14	38.2	+ 1.4	50	17	12	31	20	5.16	-0.91	0.75	3.5	22	3	12	16	...	J. W. Sheets.
Blewett.	Chelan.	2,200	1	...	...	...	...	...	...	3.33	0.74	...	13	...	...	...	...	...	U. S. navy yard.	
Bremerton.	Kitsap.	30	...	...	...	...	...	...	...	...	0.61	16.0	6	9	7	15	...	...	Mrs. H. F. Bertram.	
Brewster.	Okanagan.	1,620	1	25.4	42	8	10	26	19	1.64	...	...	...	...	...	...	...	...	...	
Bumping Lake.	Yakima.	3,400	1	25.4	52	22	13	24	26	2.84	...	1.08	15.4	19	8	3	20	...	George Landsburg.	
Cedar River.	King.	535	4	...	...	...	...	...	...	6.81	...	...	...	...	...	...	...	...	I. S. Turner.	
Centralia.	Lewis.	212	18	40.3	-0.4	54	1	28	20	20	4.37	-3.75	0.93	T.	19	1	13	17	s.	J. A. Balmer.
Cheney.	Spokane.	2,351	12	32.0	+ 1.5	52	22	13	24	26	2.84	-1.47	0.50	29.0	16	11	8	12	...	Geo. Gibbs.
Cle Elum.	Kittitas.	1,930	12	32.0	+ 1.5	52	22	13	24	26	2.84	-0.67	0.30	29.0	16	11	8	12	...	W. L. Sax.
Clearbrook.	Whatcom.	140	8	36.8	52	7	13	30	19	7.90	...	0.96	19.0	20	7	9	19	...	Wm. Baines.	
Colfax.	Whitman.	2,300	22	...	...	...	...	...	...	4.81	...	0.90	32.6	16	10	4	17	...	U. S. Reclamation Service.	
Colville.	Stevens.	1,635	11	25.0	-2.1	41	6	-6	26	28	2.67	+ 0.81	0.57	24.2	14	8	3	20	...	Otto Wollweber.
Conconully.	Okanogan.	2,300	11	25.6	-0.5	46	11	3	24	27	1.92	-0.25	0.60	20.0	8	6	9	16	...	J. L. Thayer.
Cowiche.	Yakima.	1,874	11	33.4	-53	8	17	12	14	32	0.91	0.20	6.0	10	9	8	18	4	...	W. W. Hendron.
Crescent.	Lincoln.	2,250	11	26.0	-3.0	45	10	6	26	24	1.76	-0.59	0.98	18.0	5	3	11	17	...	James Mills.
Crescent.	do.	2,450	2	25.6°	42°	10	4°	26	23°	1.27	...	0.31	...	8	5	7	19	...	Walter O. Eckert.	
Davenport.	Columbia.	1,700	25	35.6	+ 1.4	52	22	15	31	25	2.33	-1.82	0.19	14.0	13	3	12	16	...	T. Z. Andrews.
Dayton.	Deer Park.	2,050	2																	

TABLE 1.—Climatological data for December, 1911. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
				Mean.			Departure from the normal.			Lowest.			Greatest daily range.			Total.					
				Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.						
<i>Washington—Contd.</i>																					
Kiona.	Benton.	430	6	58.2	62	28	24	34	6.00	0.84	17.0	23	1	17	13	ne.	J. A. Ulsh.				
Kosmos.	Lewis.	775	5	38.0	-1.7	52	27	26	29	6.15	-2.18	0.72	3.5	20	1	11	19	Joseph Brothers.			
La Center.	Clarke.	250	14	38.0	-2.2	47	8†	8	21	25	1.30	0.39	7.5	10	6	6	19	M. E. Schreck.			
La Crosse.	Whitman.	1,400	2	32.2	-	47	8†	8	21	25	4.69	0.63	32.7	19	3	3	25	U. S. Reclamation Service.			
Lake Clealum.	Kittitas.	2,171	2	28.6	-	50	25	9	31	36	6.40	0.89	36.0	19	5	10	16	Do.			
Lake Kachess.	do.	2,335	3	28.6	-	50	25	9	31	36	7.54	1.00	75.0	22	4	6	21	Do.			
Lake Keechelus.	do.	2,479	3	27.5	-2.5	42	1	12	30	19	1.83	-0.23	0.58	19.5	9	1	17	13			
Lakeside.	Chelan.	1,116	20	27.5	-	42	1	12	30	19	3.08	-	0.75	19.5	17	3	22	W. H. Van Meter.			
Laurel.	Klickitat.	1,900	2	27.0†	-	44†	6	-24	30	36	2.79	-	26.8	8	3	20	se.				
Laurier.	Ferry.	1,644	1	27.0†	-	52†	2	16†	31	19	-	-	0.06	4.0	24	e.	Mrs. Minnie E. Strout.				
Lester.	King.	1,614	7	35.4†	-	52†	2†	31	31	12	11.40	-	1.52	0	27	0	22	Augustine Smith.			
Lone Tree.	Chehalis.	14	2	43.2	-	52	2†	31	31	12	-	-	-	-	-	-	-	U. S. Engineer Corps.			
Longmire Springs.	Pierce.	2,800	3	-	-	-	-	-	-	-	1.65	-	0.45	31.0	10	8	6	17	P. H. Leese.		
Lost Creek.	Okanogan.	3,125	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Paul M. McConieh.			
Lucerne.	Chelan.	1,100	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mary McCumber.			
McConieh.	Grant.	1,072	30.0	-	52	8	2	21	27	0.96	-	0.22	12.3	10	7	4	20	C. C. Ward.			
McCumber Ranch.	Yakima.	2,182	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G. H. Mottinger.			
Moses Lake.	Grant.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H. B. Scudder.			
Mottinger.	Benton.	307	11	37.4	+0.7	58	8†	20	27	33	0.61	-0.66	0.17	1.8	6	18	5	e.	Chas. M. Talmadge.		
Mount Pleasant.	Clallam.	500	-	38.0	+0.8	55	22	25	31	19	2.23	-	0.80	4.0	12	0	19	12	Weather Bureau.		
Moxee.	Yakima.	1,000	19	31.8	+0.8	57	12	10	21†	36	0.47	-0.64	0.19	3.4	6	8	17	6	W. F. Case.		
Newport.	Stevens.	2,400	1	25.1	-	41	8	-11	26	28	3.12	-	0.47	33.0	17	4	7	20	Albert Bender.		
North Head.	Pacific.	211	9	43.8	-0.5	59	2	32	31	13	8.17	+0.69	1.13	0	25	5	5	21	Ruth J. Shepard.		
Northport.	Stevens.	1,350	12	25.6	-	40	3†	-	6	31	30	2.99	-1.05	0.54	36.0	17	11	7	13	Wm. M. Dorr.	
North Yakima.	Yakima.	1,070	2	31.8	-	54	12	12	20	30	0.28	-	0.13	2.5	4	15	5	11	Cecil S. Willis.		
Nutland.	Klickitat.	2	36.4	-	54	10	17	4	29	0.67	-	0.18	-	11	-	-	-	Saint John Umbrige.			
Odessa.	Lincoln.	1,540	8	27.4	-	45	8	8	26	30	1.62	-	0.70	16.0	7	2	9	sw.			
Olga.	San Juan.	50	21	41.8	+0.2	52	1	27	31	13	5.05	+0.24	0.64	3.0	17	0	16	16	Geo. H. Stocking.		
Olympia.	Thurston.	200	33	40.4	-0.6	55	8	27	20	18	4.61	-5.07	0.81	0.50	18.7	7	6	2	23	Chas. W. Nicol.	
Omak.	Okanogan.	850	2	25.2	-	39	9	-3	26	32	1.87	-	-	-	-	-	-	-	Agent N. P. Ry.		
Oroville.	do.	922	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R. R. Conger.			
Parker.	Yakima.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P. M. Ramsey.			
Peola.	Garfield.	5,000	2	-	-	-	-	-	-	-	1.79	-	0.65	19.1	12	5	14	12	Samuel Gruell, sr.		
Pomeroy.	do.	1,500	19	34.6	-0.8	50	22	18	3†	22	1.51	-0.77	0.44	9.0	7	1	10	20	Peter McClung.		
Port Crescent.	Clallam.	259	16	39.1	+0.8	53	22	28	20	20	3.24	-	3.64	0.98	0.2	20	0	17	14	Weather Bureau.	
Port Townsend.	Jefferson.	80	21	42.8	+1.6	51	1†	27	31	11	1.80	-	0.56	0.2	13	0	1	30	F. Plummer.		
Pullman.	Whitman.	2,550	19	31.6	-0.5	51	12	8	26	28	2.08	-	0.85	0.50	19.0	17	5	9	17	State Agricultural College.	
Quetae River.	Chehalis.	16	-	41.8	-	52†	1	28†	31	17	12.32	-	1.71	T.	-	3	9	12	C. A. Bullard.		
Quinault.	do.	300	4	40.8	-	56	4	29	13†	24	17.46	-	2.10	-	24	4	14	13	A. V. Higley.		
Republic.	Ferry.	2,628	11	22.0	-4.1	40	6	-4	26	11	2.26	-	0.42	28.0	11	7	1	23	F. C. Comstock.		
Rex Creek.	Chelan.	1,135	4	34.6†	-	50†	12	12†	31	16	1.50	-	-	18.0	-	4d	4d	19d	Geo. H. Devin.		
Ritzville.	Adams.	1,825	12	-	-	-	-	-	-	-	2.24	+0.74	0.51	-	12	-	-	-	Weather Bureau.		
Robertsville.	Klickitat.	-	-	31.6	-	47	19	15	29	23	2.55	-	0.58	19.0	15	2	29	0	O. N. Wiswell.		
Rock Lake.	Whitman.	1,910	5	29.9	-	45	8	9	21	21	1.97	-	0.42	9.5	9	12	6	13	Geo. M. Snyder.		
Rosalia.	do.	2,425	19	30.8	-0.6	47	1	9	26	25	1.67	-0.77	0.31	7.9	11	3	4	24	Mrs. Winifred E. Buckingham.		
Russells Ranch.	Yakima.	2,870	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Rollin J. Reeves.			
Seattle.	King.	123	20	41.2	0.0	53	22	30	31	17	3.75	-2.29	0.75	3.1	21	0	6	25	Geo. W. Reckers.		
Sedro Woolley.	Skagit.	38	14	39.4	-1.2	57	22	29	24†	14	9.89	+4.53	1.29	-	26	5	7	19	Geo. W. Wallace.		
Sixprong.	Klickitat.	1,240	4	36.2	-	58	6	18	4†	28	0.66	-	0.14	1.5	9	16	4	11	Chas. W. Gunn.		
Skagit Power Dam.	Whatcom.	510	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Weather Bureau.			
Snohomish.	Snohomish.	100	17	38.0	-2.5	55†	8†	18	31	24†	5.08	-1.17	0.70	2.20	2	3	26	26	John Bozorth.		
Snoqualmie Falls.	King.	667	12	39.6	-	58	2	26	31	25	7.00	-0.55	1.10	16.5	22	7	3	21	Irving Club.		
Snyders Ranch.	Okanogan.	2,200	2	21.7	-	47	10	-3	31	29	1.21	-	0.39	20.0	6	11	15	20	U. S. Reclamation Service.		
South Bend.	Pacific.	16	42.2	-1.0	59	3	30	24†	21	9.41	-4.91	-	1.25	-	24	9	8	14	U. S. Forest Service.		
Spokane.	Spokane.	1,943	30	29.2	-1.6	46	8	2	31	20	2.04	-0.58	0.35	18.1	16	2	2	27	Geo. Eubanks.		
State University.	King.	170	2	40.1	-	50	8†	30	31	14	5.25	-	0.98	1.5	20	4	1	26	F. M. French.		
Stokes Ranch.	Okanogan.	2,670	2	-	-	-	-	-	-	-	1.40	-	0.36	16.8	7	8	14	19	G. G. Eubanks.		
Summer.	Pierce.	77	3	39.8	-	54	8	24	31	24	4.61	-	0.92	6.0	21	3	5	23	John Bozorth.		
Sunnyside.	Yakima.	740	16	32.2	-0.7	56	8	13	31	28	0.38	-	0.46	0.15	3.5	7	7	12	Geo. W. Reckers.		
Tacoma.	Pierce.	213	25	40.6	+0.3	53	23	30	31	16	3.71	-	0.68	7.2	20	1	4	26	Geo. W. Wallace.		
Tatoosh Island.	Clallam.	85	26	43.4	-0.5	51	4	33	29	13	9.38	-	5.21	1.11	0.1	26	4	4	23	Weather Bureau.	
Tleton.	Yakima.	2,000	2	30.9	-	49	8†	10	31	30	1.67	-	0.26	14.4	14	10	5	16	Do.		
Tonasket.	Okanogan.	945	-	-	-	-	-	-	-	-	2.12	-	0.70	18.7	11	7	11	13	Clarence Clements.		
Touchet.	Walla Walla.	556	4	34.7	-	58	22	13	1†	33	1.21	-	0.35	5.0	11	9	10	12	D. W. Dorrance.		
Touchet Ridge.	Columbia.	2,500	2	-	-	-	-	-	-	-	6.98	-	1.20	43.0	11	4	11	16	R. H. King.		
Trinidad.	Douglas.	900	7	29.8	-	56	10	12	22	27	1.69	-	0.60	14.0	5	8	9	14	J. C. Wheeler.		
Vancouver.	Clarke.	100	36	40.9	-2.2	57	10	27	29	15	3.82	-	2.80	0.86	1.0	15	3	7	21	A. A. Quarnberg.	
Vashon Island.	King.	40	22	40.7	-0.2	51	8†	31	20	16	4.88	-	2.25	0.62	-	26	0	6	25	Gertrude McClintock.	
Wahluke.	Grant.	410	7	31.9	-	56	10†	12	1	30	0.74	-	0.20	6.7	7	10	6	15			

TABLE 1.—Climatological data for December, 1911. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.
				Mean.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Oregon—Continued.</i>																		
Burns.....	Harney.....	4,157	20	23.8	-1.8	54	12	-6	20	44	0.71	-0.51	0.38	8.0	4	18	9	J. C. Welcome, Jr.
Cascade Locks.....	Hood River.....	100	21	38.8	+0.3	53	22	-26	29	16	9.94	-6.62	1.17	5.5	24	4	23	Val. W. Tomkins.
Caradero.....	Clackamas.....	503	2	41.2	.....	61	2	-25	28	26	7.01	.....	0.91	4.2	23	0	6	Alf. Drill.
Cliff.....	Lake.....	4,300	4	25.4	.....	54	1	-6	21	51	0.54	.....	0.26	3.0	3	5	John C. Green.	
Condon.....	Gilliam.....	2,884	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Williams.	
Corvallis.....	Benton.....	266	23	39.6	-1.4	53	15	-28	29	19	5.27	-1.55	0.83	0	18	3	Oregon Agricultural College.	
Crescent.....	Klamath.....	4,400	24	24.2	.....	50	1	-18	9	49	1.29	.....	19.7	11	13	2	11	A. M. Caisse.
Dayville.....	Grant.....	2,200	17	33.8	-2.9	57	5	54	2	30	29	16	12.09	0.4	10	7	14	Dr. J. Campbell-Martin.
Deadwood.....	Lane.....	350	1	41.2	.....	54	5	30	29	16	0.38	-0.92	0.18	2.00	19	3	11	Jos. Slemmons.
Doraville.....	Columbia.....	600	10	38.3	+0.4	55	2	26	29	25	5.25	-2.77	.90	6.0	27	2	4	Ira Wimberly.
Drain.....	Douglas.....	300	9	41.0	.....	54	10	30	28	19	5.95	.....	11	T.	5	5	R. B. Stanfield.	
Echo.....	Umatilla.....	625	7	37.0	.....	59	29	15	1	29	0.45	.....	0.16	1.5	18	2	10	Carl F. Treedson.
Ella.....	Morrow.....	830	7	36.4	.....	56	8	14	3	28	0.56	-0.53	0.20	1.5	18	2	10	F. L. Barker.
Eugene.....	Lane.....	449	21	41.0	-0.6	54	10	29	29	22	3.81	-2.50	0.95	14	0	8	Wm. Bettys.	
Fairview.....	Coos.....	142	15	41.0	-4.6	53	6	27	18	32	9.98	-0.60	1.32	0.5	17	2	8	Chas. F. Vick.
Falls City.....	Polk.....	355	14	38.6	-1.0	54	8	27	24	25	8.53	-5.56	1.56	17	6	9	Pacific University.	
Forest Grove.....	Washington.....	220	22	40.0	+0.9	55	2	23	29	28	5.36	-2.81	0.72	1.5	20	0	8	J. S. Gray.
Gardiner.....	Douglas.....	72	21	.....	.....	.....	.....	.....	.....	.....	7.44	-4.89	1.50	10	15	8	B. J. Simpson.	
Glendale.....	do.....	1,441	7	42.0	.....	58	12	24	1	28	4.23	.....	1.40	6.0	12	15	Mrs. Jennie A. Reehler.	
Glenora.....	Tillamook.....	575	20	39.4	+0.8	52	1†	27	13	20	14.14	-8.53	2.05	22.0	21	4	L. N. Ford.	
Granite.....	Grant.....	4,680	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John B. Paddock.	
Grants Pass.....	Josephine.....	956	23	37.0	-2.8	52	5	22	22	26	3.59	-1.95	0.99	2.6	16	1	9	Agent O.-W. R. & N. Co.
Grass Valley.....	Sherman.....	2,381	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	5	Miss Belle Ely.	
Gurdane.....	Umatilla.....	3,500	34.0	.....	.....	57	2	10	21	31	11.60	+1.54	1.37	7.0	25	2	27	Portland Workworks.
Headworks.....	Clackamas.....	719	9	37.2	.....	47	8	27	29	13	11.60	-0.72	0.17	T.	8	6	17	Frank Gilliam.
Heppner.....	Morrow.....	1,950	21	36.8	-1.3	56	9	17	2	28	0.77	.....	0.17	0.5	5	12	C. W. Kellogg.	
Hermiston.....	Umatilla.....	451	4	36.2	.....	60	10	12	2	40	0.42	.....	0.17	0.5	5	6	Carl T. Hubbard.	
Hernoso Rio.....	Crook.....	2,300	30.8	.....	.....	49	22	14	29	26	1.12	.....	0.34	9.0	8	16	H. L. Hasbrouck.	
Hood River.....	Hood River.....	300	21	37.2	+1.9	54	22	21	2	20	4.65	-4.56	0.70	7.0	13	10	L. Connell.	
Huntington.....	Baker.....	2,165	10	32.0	.....	49	8	6	21	34	1.14	-0.45	0.40	11.0	10	25	E. Britt.	
Jacksonville.....	Jackson.....	1,640	23	34.4	-3.4	55	3	23	21	21	2.79	-1.89	0.90	5.8	10	5	F. F. McCully.	
Joseph.....	Wallowa.....	4,400	22	25.8	+0.2	50	4	6	21†	33	1.70	+0.09	0.40	17.0	10	7	Edson C. Watson.	
Klamath Agency.....	Klamath.....	4,169	3	21.0	.....	39	4†	-6	29	33	2.90	.....	28.5	6	12	W. H. Heileman.		
Klamath Falls.....	do.....	4,100	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.	
La Grande.....	Union.....	2,784	24	32.4	+0.3	57	4	10	21	27	1.94	-0.52	0.44	12.2	12	6	7	W. A. Worstell.
Lakeview.....	Lake.....	4,825	29	32.2	+2.2	64	1	-9	23	43	1.11	-1.09	0.35	13.2	8	9	Ralph C. Koozer.	
McKenzie Bridge.....	Lane.....	1,400	10	34.4	-0.9	52	2	13	29	33	1.19	-3.17	1.03	2.3	22	2	27	Geo. Frissell.
McMinnville.....	Yamhill.....	182	24	39.9	-0.6	53	2†	27	29	19	5.35	-2.39	1.17	1.5	18	6	23	M. E. Pettit.
Marshfield.....	Coos.....	34	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.	
Medford.....	Jackson.....	1,425	.....	36.0	.....	57	3	21	1	30	1.88	.....	0.56	6.0	14	3	18	Do.
Merrill.....	Klamath.....	4,070	5	.....	.....	54	1	21	28	30	1.81	.....	0.60	0.0	0	0	0	Mrs. Agnes Ritchson.
Metolius.....	Crook.....	3,600	35.6	.....	.....	59	17	12	23	32	0.61	.....	0.18	0.5	4	9	W. E. Lottman.	
Mikkalo.....	Gilliam.....	1,400	5	.....	.....	50	4†	10	20	38	T.	.....	.....	.....	.....	.....	Francie Little.	
Miramonte Farm.....	Clackamas.....	195	23	40.0	-0.2	52	10	26	29	18*	4.37	-1.88	0.74	1.0	21	2	4	G. Muecke.
Monroe.....	Benton.....	350	14	40.5	-0.6	54	2	28	4	23	6.05	-1.99	1.54	1.03	14	1	11	L. A. Peek.
Mount Angel.....	Marion.....	485	25	41.4	0.0	56	22	29	3†	16	5.84	-1.53	0.85	T.	17	4	M. P. Baldwin.	
Mount Hood.....	Hood River.....	1,650	1	.....	.....	60	2	29	28	9	3.32	.....	1.50	0	15	9	S. G. Babson.	
Musick.....	Douglas.....	5,000	21	31.5	.....	50	2	11	28	19	15.61	.....	0.28	15.4	12	6	Alex. Lundberg.	
Newport.....	Lincoln.....	69	24	45.2	-1.2	65	7	27	28	23	8.47	-2.05	2.58	124.5	21	10	Wm. Matthew.	
Paisley.....	Lake.....	4,500	8	30.4	.....	50	4†	10	20	38	T.	.....	1.43	0.0	20	3	E. C. Woodward.	
Paulina.....	Crook.....	1,070	22	.....	.....	56	21	16	2†	26	0.94	.....	0.34	1.5	9	E. F. Averill.		
Pendleton.....	Umatilla.....	1,817	3	36.1	.....	57	1	6	29	27	13.18	+1.60	1.85	64.5	20	3	John P. McManus.	
Pilot Rock.....	Clackamas.....	3,879	16	34.0	+1.3	57	1	21	29	21	4.74	-2.60	0.87	0.6	20	0	E. Coalman.	
Pompeii.....	Multnomah.....	57	41	41.1	-0.2	55	10	29	29	21	4.74	-2.60	0.87	0.6	20	0	U. S. Weather Bureau.	
Portland.....	Curry.....	80	6	43.4	.....	64	2	28	29	28	9.32	.....	1.50	0	15	9	J. D. Loucks.	
Port Orford.....	Prairie City.....	3,425	30.2	.....	.....	49	5	2	21	28	1.48	.....	0.28	15.4	12	6	A. M. F. Kirchheiner.	
Prineville.....	Grant.....	2,864	15	31.8	-4.0	60	3	9	25†	30	1.34	-0.49	-0.51	0.22	3	15	7	Geo. Summers.
Prospect.....	Jackson.....	2,800	5	34.0	.....	62	2	5	29	36	5.44	-0.49	-0.51	0.95	48.5	14	3	E. F. Graham.
Ramsey.....	Wasco.....	1,350	10	33.9	.....	58	22†	19	2†	30	1.34	.....	0.46	6.2	9	23	Mrs. Iva B. Collins.	
Range.....	Grant.....	3,500	3	28.8	.....	53	1	0	21	30	1.76	.....	0.45	.....	7	7	Mrs. Emma Arbuckle.	
Redmond.....	Redmond.....	10	32.3	.....	.....	57	1	6	29	32	0.10	.....	0.10	1.0	1	17	E. E. Foote.	
Richland.....	Crook.....	2,350	10	29.0	+0.9	51	4	2	21	33	1.01	.....	0.60	9.5	6	10	L. G. Morgan.	
Riverside.....	Baker.....	3,000	12	25.7	-1.1	45	12	-2	21	35	1.03	-0.24	0.40	10.0	6	17	Mrs. Leah Fairman.	
Roseburg.....	Douglas.....	510	33	40.0	-1.9	55	5	29	22	4	3.47	-1.55	1.20	0.3	18	1	18	U. S. Weather Bureau.
Salem.....	Marion.....	120	21	41.2	-0.7	53	23	29	29	14	3.95	-2.00	0.76	T.	14	1	28	M. P. Baldwin.
Silver Lake.....	Lake.....	4,700	14	26.8	-3.0	52	1†	-15	21	25	5.43	-0.69	0.10	1.5	6	15	G. W. Marvin.	
Siskiyou.....	Jackson.....	4,115	3	32.0	.....	59	3	14	29	23	4.27	.....	1.15	48.0	14	3	U. S. Weather Bureau.	
Sparta.....	Baker.....	4,150	20	28.5	+1.2	48	5	6	21	25	3.82	+0.16	1.50	35.0	10	13	J. A. Wright.	
Stafford.....	Clackamas.....	400	15	40.2	-0.5	58	10	25	29	27	4.75	-2.50	0.90	0.7	23	6	S. L. Brooks.	
The Dalles.....	Wasco.....	112	37	38.6	+2.8	58	8	20	21	29	0.85	.....	0.13	14.7	11	6	C. B. Crosno.	
Toledo.....	Lincoln.....	75	21	42.8	-1.6	58	2†	29	29	27	5.55	-1.82	1.20	0	4	11	Mrs. Helen T. Duncan.	
Umatilla.....	Umatilla.....	340	23	36.2	+1.4	55	7†	18	3	30</								

TABLE 2.—*Daily precipitation for December, 1911. District No. 12, Columbia Valley.*

TABLE 2.—*Daily precipitation for December, 1911. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for December, 1911. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for December, 1911. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for December, 1911. District No. 12—Continued.*

\* Precipitation included in that of the next measurement

<sup>†</sup> Separate dates of falls not recorded.

Precipitation for the 24 hours ending on the morning when it is measured.  
T Precipitation is less than 0.01 inch rain or melted snow.

T. Precipitation is less than 0.01 inch rain or melted snow

TABLE 3.—*Maximum and minimum temperatures for December, 1911. District No. 12, Columbia Valley.*

Date.	Montana.				Afton, Wyo.	Idaho.																Vernon.		Wallace.				
	Kalispell.		Missoula.			Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.		
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1...	38	22	46	23	29	0	40	24	40	29	41	14	49	32	40	6	44	15	37	12	44	20	37	7	40	30		
2...	36	17	42	20	29	-5	40	22	37	24	48	11	50	27	42	9	45	16	35	10	46	18	37	10	36	23		
3...	29	10	36	14	23	-5	41	24	32	29	45	20	44	25	43	13	48	20	32	7	50	22	38	20	42	24		
4...	21	15	36	16	23	1	46	28	35	15	46	28	42	26	42	10	51	23	30	8	51	30	42	12	32	25		
5...	26	17	35	15	34	-2	50	27	36	15	48	17	40	26	45	14	50	22	29	9	50	20	38	12	35	22		
6...	29	23	34	15	30	0	44	32	37	13	52	28	40	31	40	14	45	19	36	11	40	22	37	13	39	28		
7...	35	28	43	27	32	5	39	27	36	17	53	23	33	31	36	18	32	19	40	16	30	25	28	3	36	32		
8...	40	31	45	27	23	7	42	28	42	28	43	24	49	32	35	9	37	17	38	17	34	13	28	16	45	31		
9...	42	32	41	32	30	5	43	29	42	29	41	26	47	36	41	14	34	26	39	22	49	19	39	20	36	30		
10...	42	27	41	29	30	16	43	29	44	27	45	28	52	32	33	12	36	20	40	26	40	20	25	17	46	32		
11...	28	16	35	20	31	-4	43	25	40	23	52	22	36	30	30	15	30	12	32	11	36	13	20	-2	36	24		
12...	32	18	42	26	30	7	42	29	39	16	50	22	41	31	30	11	34	23	34	14	40	12	25	20	38	32		
13...	26	15	32	23	30	11	42	24	37	18	42	21	39	29	30	9	29	14	30	9	37	12	27	0	33	23		
14...	32	24	36	25	25	4	42	26	38	24	42	18	38	30	32	13	35	21	28	9	34	12	25	15	41	27		
15...	31	24	36	24	32	11	41	30	35	25	44	22	40	33	30	15	36	23	26	11	37	18	29	20	36	28		
16...	34	26	40	23	36	23	39	30	37	11	45	30	45	34	33	14	34	26	28	10	35	22	28	24	38	32		
17...	27	16	32	22	30	0	38	25	32	11	40	30	36	31	33	13	29	17	34	9	35	25	30	9	29	23		
18...	27	21	34	20	20	-12	33	18	40	19	41	30	33	33	33	13	27	9	25	10	30	24	29	0	33	28		
19...	28	23	30	13	10	-22	33	21	36	19	32	21	35	30	25	-3	24	15	24	7	26	15	8	-8	34	22		
20...	31	23	31	23	25	-14	26	15	35	23	36	21	41	28	26	5	24	17	23	6	25	19	18	-3	31	28		
Mns...	27.6	16.9	32.4	18.0	26.6	1.8	38.0	24.3	34.9	16.9	42.1	21.3	39.4	28.1	31.9	8.2	32.6	17.5	27.7	8.8	33.4	15.8	25.9	7.7	33.5	23.6		

Date.	Washington.				Aberdeen.	Blaine.	Colville.	Kosmos.	Lakeside.	North Head.	North Yakima.	Odessa.	Port Crescent.	Seattle.	Sixprong.	Spokane.	Tacoma.	Tatoosh Island.																
	Aberdeen.		Blaine.																															
	Max.	Min.	Max.	Min.																														
1...	53	39	50	40	34	25	50	31	42	24	54	45	42	14	38	19	49	40	49	43	21	39	29	49	37	51	48							
2...	52	35	48	30	38	18	62	28	39	26	59	46	45	16	40	20	45	35	45	37	39	23	40	27	43	35	51	44						
3...	44	32	44	28	32	18	55	37	34	28	55	49	39	39	19	40	22	48	31	42	35	20	34	21	41	32	47	44						
4...	46	32	46	30	34	18	46	28	30	26	51	44	42	15	35	12	45	31	48	38	39	18	38	22	49	37	51	45						
5...	48	36	49	40	34	22	45	35	34	26	50	42	36	21	36	20	44	32	46	41	43	25	35	27	48	37	48	44						
6...	49	35	46	42	41	29	46	38	41	30	46	42	47	32	36	26	48	37	46	40	58	30	38	34	46	41	47	43						
7...	48	36	43	38	35	32	40	34	34	25	49	42	40	24	38	21	46	38	46	39	43	23	39	31	47	39	49	43						
8...	52	39	50	43	39	31	47	38	37	29	49	47	53	28	45	20	51	42	52	44	53	36	46	38	52	43	50	45						
9...	50	38	47	40	38	22	46	39	40	29	49	45	50	25	42	21	52	40	49	44	49	37	41	35	50	43	50	45						
10...	49	43	46	41	32	25	47	40	39	24	48	45	50	22	44	23	47	39	48	44	56	35	43	26	48	44	47	45						
11...	49	44	48	43	32	22	45	40	37	24	48	45	48	24	40	22	50	36	50	45	53	32	38	25	50	41	48	45						
12...	44	29	47	37	34	28	48	35	35	24	48	39	54	28	38	20	45	35	49	39	48	29	36	29	47	34	47	42						
13...	46	31	42	29	34	25	43	30	28	22	44	36	49	19	39	23	42	30	38	32	43	23	35	28	36	31	45	41						
14...	44	35	42	34	33	27	41	31	33	25	47	38	37	23	40	24	44	34	44	37	42	27	35	27	44	34	45	41						
15...	51	39	41	37	31	28	42	34	35	29	50	41	37	28	39	20	49	37	48	40	48	28	37	29	50	38	47	39						
16...	47	40	42	39	32	26	45	37	33	25	45	42	32	24	40	21	44	34	49	43	44	31	36	31	47	40	47	42						
17...	44	34	44	29	31	11	46	28	37	28	47	42	48	30	34	19	45	33	49	38	45	32	35	24	49	35	46	43						
18...	48	40	44	37	30	4	43	29	33	25	46	44	39	33	25	35	26	45	37	47	43	49	26	34	30	50	41	47						
19...	48	33	48	41	34	28	40	36	34	25	46	39	35	30	32	28	46	35	45	37	43	25	33	30	46	36	47	42						
20...	37	29	44	35	30	22	39	31	28	17	44	39	37	12	28	13	38	39	44	36	44	28	30	25	40	33	43	38						
21...	44	38	33	28	24	15	38	30	23	13	46	40	29	16	32	12	42	34	44	36	34	18	32	19	44	34	48	40						
22...	49	36	49	36	34	26	48	36	27	17	48	40	40	18	39	17	53	33	53	36	49	24	42	28	53	37	49	36						
23...	42	34	44	36	28	18	44	32	38	23	43	36	48	29	30	13	45	33																

TABLE 3.—*Maximum and minimum temperatures for December, 1911. District No. 12—Continued.*

Date.	Walla Walla, Wash.		Oregon.																		
			Ashland.		Baker.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1.	40	29	46	29	41	20	49	32	46	14	47	36	57	21	48	31	38	23	44	10	
2.	37	25	62	31	44	18	45	33	41	12	52	31	54	18	41	32	39	20	40	8	
3.	34	22	65	51	46	26	43	33	38	14	45	38	60	14	40	34	38	23	48	10	
4.	43	28	54	32	51	27	53	31	44	17	46	33	53	12	45	33	39	21	51	12	
5.	34	28	52	40	47	27	52	44	41	21	48	40	55	15	55	44	41	31	42	16	
6.	45	32	49	37	37	29	51	40	42	26	48	39	53	22	48	33	49	35	39	27	
7.	48	35	44	28	37	22	46	33	41	21	48	39	40	19	47	32	52	33	38	24	
8.	52	43	45	28	39	30	53	36	57	37	51	44	56	22	50	32	58	37	42	29	
9.	48	38	45	36	40	24	50	35	55	34	49	43	49	18	47	34	53	38	48	23	
10.	51	41	37	29	42	23	55	42	60	35	55	45	50	17	49	33	54	43	50	24	
11.	47	39	35	32	35	22	52	39	58	30	51	45	54	27	47	39	53	36	44	21	
12.	48	37	34	26	38	26	46	34	50	38	47	35	49	22	43	38	51	40	50	16	
13.	47	31	35	27	40	20	44	34	58	33	39	35	50	28	45	36	44	27	46	16	
14.	42	31	44	31	37	23	45	36	45	26	41	37	49	15	50	36	49	33	42	33	
15.	45	32	44	29	36	22	53	42	42	32	51	41	50	31	52	42	46	38	35	23	
16.	46	32	37	31	31	20	48	38	42	27	47	42	51	30	48	34	44	33	32	19	
17.	38	32	36	29	35	19	44	33	50	32	46	38	44	22	39	34	41	34	42	30	
18.	42	30	42	29	28	13	47	33	41	21	41	34	38	28	46	29	34	33	40	14	
19.	38	29	38	29	26	8	47	36	42	26	46	37	40	21	46	35	49	33	39	13	
20.	41	33	37	22	30	2	43	30	46	29	42	35	43	12	39	33	46	35	32	5	
21.	37	18	40	25	27	3	45	32	35	16	42	35	36	13	47	34	41	27	34	7	
22.	55	37	44	32	33	17	53	39	58	32	52	39	40	19	53	29	51	35	33	15	
23.	41	35	36	29	35	15	52	33	55	31	41	37	40	25	42	34	48	33	38	14	
24.	38	30	36	25	27	5	44	30	44	31	42	34	37	13	41	32	44	33	37	16	
25.	41	29	34	23	27	5	46	33	51	24	44	35	36	9	45	32	50	34	31	8	
26.	44	32	36	25	25	11	46	36	41	26	47	40	33	11	49	37	44	35	30	22	
27.	50	34	39	30	35	22	49	37	55	34	44	39	41	9	47	35	47	32	31	24	
28.	38	29	35	26	28	15	46	30	51	25	40	29	37	12	38	32	44	30	27	25	
29.	33	23	30	15	28	16	38	29	40	28	37	29	37	14	39	31	40	29	34	19	
30.	40	21	38	25	27	18	41	34	38	25	41	37	38	13	43	36	38	28	32	14	
31.	27	17	36	25	26	19	41	35	35	24	39	31	36	16	42	33	35	29	31	20	
Mns.	42.3	30.7	41.5	29.2	34.8	18.3	47.4	34.9	46.5	26.0	45.5	37.2	45.4	18.3	45.6	34.3	45.2	32.0	38.8	18.1	

<sup>a</sup>, <sup>b</sup>, <sup>c</sup>, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

Data are from standard instruments not supplied by the U. S. Weather Bureau.

<sup>§</sup> Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.